

US EPA ARCHIVE DOCUMENT

Standard Volume-to-Weight Conversion Factors

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Category	Recyclable Materials (u/c = uncompactd/ compactd & baled)	Volume	Estimated Weight (in pounds)
FOOD SCRAPS ^A	Food scraps, solid and liquid fats	55-gal drum	412
GLASS	Bottles ^B :		
	Whole bottles	1 yd ³	500-700
	Semicrushed	1 yd ³	1,000-1,800
	Crushed (mechanically)	1 yd ³	1,800-2,700
	Uncrushed to manually broken	55-gal drum	300
	Refillable Whole Bottles ^C :		
	Refillable beer bottles	1 case = 24 bottles	10-14
	Refillable soft drink bottles	1 case = 24 bottles	12-22
	8 oz glass container	1 case = 24 bottles	12
	LEAD-ACID BATTERIES	Car ^D	1 battery
Truck ^E		1 battery	53.3 lb lead and plastic
Motorcycle ^E		1 battery	9.5 lb lead and plastic
METALS	Aluminum Cans ^F :		
	Whole	1 yd ³	50-75
	Compactd (manually)	1 yd ³	250-430
	Uncompactd	1 full grocery bag	1.5
		1 case = 24 cans	0.9
	Ferrous (tin coated steel cans) ^G :		
	Whole	1 yd ³	150
	Flattened	1 yd ³	850
	Whole	1 case = 6 cans	22
	Major Appliances ^E :		
Air conditioners (room)	1 unit	64.2	
Dishwashers	1 unit	92	
Dryers (clothes)	1 unit	130	

Category	Recyclable Materials (u/c = uncompacted/ compacted & baled)	Volume	Estimated Weight (in pounds)
METALS (cont'd)	Freezers	1 unit	193
	Microwave ovens	1 unit	50
	Ranges	1 unit	181.1
	Refrigerators	1 unit	267
	Washers (clothes)	1 unit	177
	Water heaters	1 unit	131
PAPER	Newspaper ^F :		
	Uncompacted	1 yd ³	360-505
	Compacted/baled	1 yd ³	720-1,000
	12 in. stack	—	35
	Old Corrugated Containers ^F :		
	Uncompacted	1 yd ³	50-150 (300) ^H
	Compacted	1 yd ³	300-500
	Baled	1 yd ³	700-1,100
	Computer Paper ^F :		
	Uncompacted (stacked)	1 yd ³	655
	Compacted/baled	1 yd ³	1,310
	1 case	2,800 sheets	42
	White Ledger ^F :		
	Stacked (u/c)	1 yd ³	375-465/755-925
	Crumpled (u/c)	1 yd ³	110-205/325
	Ream of 20# bond; 8-1/2 in. x 11 in.	1 ream = 500 sheets	5
	Ream of 20# bond; 8-1/2 in. x 14 in.	1 ream = 500 sheets	6.4
	White ledger pads	1 case = 72 pads	38
	Tab Cards ^F :		
	Uncompacted	1 yd ³	605
	Compacted/baled	1 yd ³	1,215-1,350
	Miscellaneous Paper:		
	Yellow legal pads ^F	1 case = 72 pads	38
Colored message pads ^F	1 carton = 144 pads	22	
Telephone directories ^l	1 yd ³	250	
Mixed Ledger/Office Paper ^F :			
Flat (u/c)	1 yd ³	380/755	
Crumpled (u/c)	1 yd ³	110-205/610	

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PLASTIC ^J	PET (Soda Bottles):		
	Whole bottles (uncompactd)	1 yd ³	30-40
	Whole bottles (compactd)	1 yd ³	515
	Whole bottles (uncompactd)	gaylord	40-53
	Baled	30 in. x 62 in.	500-550
	Granulated	semiload	30,000
	Granulated	gaylord	700-750
	8 bottles (2 L size)	16 L	1
	HDPE (Dairy):		
	Whole (uncompactd)	1 yd ³	24
	Whole (compactd)	1 yd ³	270
	Baled	32 in. x 60 in.	400-500
	HDPE (Mixed):		
	Baled	32 in. x 60 in.	900
	Granulated	gaylord	800-1,000
	Granulated	semiload	42,000
	Other Plastic:		
Uncompactd	1 yd ³	50	
Compactd/baled	1 yd ³	400-700	
Mixed PET and HDPE (Dairy):			
Whole (uncompactd)	1 yd ³	32	
Film:			
Baled	semiload	44,000	
Baled	30 in. x 42 in. x 48 in.	1,100	
TEXTILES ^I	Mixed textiles	1 yd ³	175
TIRES	Car Tires:		
	Whole tire ^E	1 tire	21
	Crumb rubber ^K	1 tire	12
	Truck Tires:		
	Whole tire ^E	1 tire	70
Crumb rubber ^K	1 tire	60	
WOOD	Wood chips ^L	1 yd ³	625
	Pallets ^F	—	30-100 (40 avg.)

Category	Recyclable Materials (u/c = uncompacted/ compacted & baled)	Volume	Estimated Weight (in pounds)
YARD TRIMMINGS ^F	Grass Clippings:		
	Uncompacted	1 yd ³	350-450
	Compacted	1 yd ³	550-1,500
	Leaves:		
	Uncompacted	1 yd ³	200-250
	Compacted	1 yd ³	300-450
	Vacuumed	1 yd ³	350
FURNISHINGS ^E	Foam rubber mattress	1 mattress	55
MUNICIPAL SOLID WASTE ^M	Residential waste (uncompacted at curb)	1 yd ³	150-300
	Commercial-industrial waste (uncompacted)	1 yd ³	300-600
	MSW (compacted in truck)	1 yd ³	500-1,000
	MSW (landfill density)	1 yd ³	750-1,250

Conversion Table Sources:

- ^AInformation obtained from Washington State.
- ^BDraft National Recycling Coalition Measurement Standards and Reporting Guidelines presented to NRC membership. October 31, 1989.
- ^CPersonal communication with a representative from Allwaste. November 6, 1995.
- ^DBattery Council International. 1995. 1994 National Recycling Rate Study.
- ^EU.S. EPA. 1995. Methodology for Characterization of Municipal Solid Waste in the United States: 1994 Update. EPA530-R-96-001. Washington, DC.
- ^FU.S. EPA. 1993. Business Guide for Reducing Solid Waste. EPA530-K-92-004. Washington, DC.
- ^GPersonal communication with a representative from the Steel Recycling Institute. November 1, 1995.
- ^HInformation obtained from New Jersey and New York States.
- ^IInformation obtained from Massachusetts State.
- ^JPersonal communication with a representative from the American Plastics Council. November 2, 1995.
- ^KPersonal communication with a representative from the Scrap Tire Management Council. November 6, 1995.
- ^LInformation obtained from Northeast Forest Products, Martin Mulch Company, and the Solid Waste Association of North America.
- ^MSolid Waste Association of North America, Manager of Landfill Operations Training and Certification Course. January 1989. Revised June 1991 and October 1994.